



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,937	01/30/2004	John R. Rogers	H26-083 US	7178
21706	7590	01/24/2006	EXAMINER	
NOTARO AND MICHALOS 100 DUTCH HILL ROAD SUITE 110 ORANGEBURG, NY 10962-2100			SMITH, TYRONE W	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/768,937	Applicant(s) ROGERS ET AL.	
	Examiner Tyrone W. Smith	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-10 rejected under 35 U.S.C. 102(b) as being anticipated by Hill et al (4535405).

Regarding Claims 1, 5, 7, 9 and 10. Hill discloses a control and force sensing method and apparatus for motors which includes a host computer (Figure 4 items 10 and 94) having a user interface (Figure 4 items 10 and 94) for entering commands to the stepper motor and defining a desired operation profile used to create initial step time sequence instructions and an interface computer or similar (Figure 4 item 16; refer also to item 14 of the same Figure) receiving real-time feedback from the stepper motor (Figure 4 items 36, 42 and 44) to obtain a measured operation profile for mathematically obtaining an objective function value (Figure 4 item 14) and modifying the initial step time sequence instructions to produce optimized step time sequence instructions, so that the measured operation profile is modified to approach the desired operation profile (Refer to the abstract; column 7 lines 57-68 and column 8 lines 1-25), the interface transmitting the optimized step-time sequence instructions to the stepper motor. Refer to the abstract; column 7 lines 57-68 and column 8 lines 1-25.

Regarding Claims 2 – 4. Hill discloses a control and force sensing method and apparatus for motors which includes an interface computer or similar (Figure 4 item 16) receiving real-time feedback from the stepper motor (Figure 4 item 44) to produce optimized

step-time sequence instructions, the interface transmitting the optimized step-time sequence instructions to the stepper motor. Refer to the abstract; column 7 lines 57-68 and column 8 lines 1-25.

Regarding Claims 6 and 8. Hill discloses a method for controlling stepper motors which includes providing an interface computer (Figure 4 item 16) connected with the stepper motor (Figure 4 item 36); generating an objective function model for optimizing a step-time sequence for the stepper motor; loading an optimization program including the objective function model on the interface computer; and generating an initial step-time sequence for the stepper motor. Refer to the abstract; column 7 lines 57-68 and column 8 lines 1-25. Further, Hill calculates a difference between the desired and measured operation profile; and applying a mathematical operation to the difference to obtain a objection function value.

Response to Arguments

3. Applicant's arguments filed November 19, 2005 have been fully considered but they are not persuasive.

The Applicant argues that Hill does not disclose obtaining a measured operation profile for mathematically obtaining an objective function value and modifying the initial step time sequence instructions to produce optimized step time sequence instructions, so that the measured operation profile is modified to approach the desired operation profile.

Examiner's rejection is based on the claims as presented; therefore in assessing Hill with the current application, it is believed by the Examiner that Hill teaches the claimed invention. First, obtaining a measured operation profile, which is presented in Hill as receiving real-time feedback from the stepper motor for mathematically for obtaining an objective function value (refer to column 7 lines 62-68 and column 8 lines 1-29 where the processor obtains the

measured and desired profiles for obtaining an objective function value). Second, modifying the initial step time sequence instructions (refer to Figure 4 item 14) to produce optimized step time sequence instructions, so that the measured operation profile is modified to approach the desired operation profile as stated in abstract and in column 2 lines 26-54.

Examiner suggests that the Applicant contacts the Examiner for any misunderstandings or clarity of the reference is relation to the claims.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tyrone W. Smith, whose telephone number is 571-272-2075. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

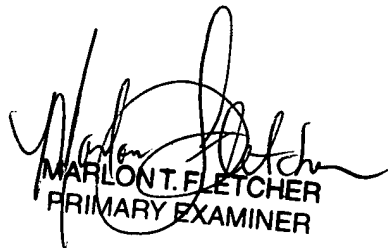
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley, can be reached on 571-272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2837

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tyrone Smith
Patent Examiner

Art Unit 2837



MARLON T. FLETCHER
PRIMARY EXAMINER